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OFFICE OF
AIR AND RADIATION

MEMORANDUM:

SUBJECT: Use of EMFAC2000 and EMFAC2001 models in California

FROM: Robert E. Larson, Acting Division Director
Transportation and Regional Programs Division
Office of Transportation and Air Quality

TO: Jack Broadbent, Director
Air Division
EPA Region IX

This memorandum describes EPA's intentions to approve new EMFAC emissions models for state implementation plan (SIP) development, and clarifies when these new models will be required for transportation conformity analyses in California. Clean Air Act section 172(c)(3) and 40 CFR 51.112(a)(1) require that SIP inventories be based on the most current and applicable models that are available at the time the SIP is developed. Clean Air Act section 176(c)(1) requires that the latest emissions estimates be used in conformity analyses.

I am sending this memorandum since EMFAC policy issues are inherent in EPA's consideration of the San Francisco Bay Area's ozone attainment SIP. The California Air Resources Board (CARB) submitted this SIP in final form on November 30, 2001. EPA will approve the use of EMFAC2000 for the Bay Area and formalize the EMFAC2000 policy described in this memorandum in a Federal Register notice of availability, before EPA finalizes its adequacy finding on the motor vehicle emissions budgets in the Bay Area's SIP. The new attainment SIP is based on EMFAC2000, a significant update to California's current EMFAC models, EMFAC7F and EMFAC7G.¹ As you know, the EMFAC model is used for calculating motor vehicle emissions only in California, and therefore, this memorandum does not affect

¹EMFAC7F and EMFAC7G are earlier versions of EMFAC approved by EPA for use in SIPs and conformity. Today's EMFAC2000 policy does not affect the use of these models in areas outside the Bay Area. For more information on how EMFAC7F and EMFAC7G apply for conformity, please see the April 16, 1998, EPA Region IX letter to CARB.

MOBILE emissions factor model users in other states.

The Office of Transportation and Air Quality (OTAQ) is posting this memorandum on our conformity website (<http://www.epa.gov/otaq/transp/traqconf.htm>). We have consulted with EPA Region IX and the Department of Transportation (DOT) on this memorandum.

Approval of EMFAC2000

EPA will approve EMFAC2000 for SIP development for only the Bay Area. EPA is proceeding with this approval because: 1) EMFAC2000 is an improvement on existing available models despite certain technical limitations as described below; and 2) CARB has committed to revise the Bay Area ozone attainment SIP's motor vehicle emissions budgets with EMFAC2001 or successor model as part of its mid-course review SIP revision in April 2004. Additionally, we understand the next EMFAC model, EMFAC2001, will correct EMFAC2000's technical limitations and be available for use in future California SIPs. Therefore, CARB does not intend to develop other SIPs with EMFAC2000.

The transportation conformity rule (40 CFR part 93.111) requires that conformity analyses be based on the latest motor vehicle emissions model approved by EPA for SIP purposes for a state or area. When EPA approves a new emissions model like EMFAC2000,² we normally establish a grace period before the model is required for new conformity analyses (40 CFR 93.111(b)). However, EMFAC2000 is now known to contain a few technical errors that overestimate emissions. Due to the limitations of EMFAC2000, it would be inappropriate to approve EMFAC2000 statewide for all SIPs, and thus to require its use for conformity determinations in all areas, particularly those without a SIP and budgets based on EMFAC2000. Based on discussions with CARB, EPA understands that EMFAC2001 or its successor will correct the limitations and include additional improvements.³ Therefore, EPA is not approving EMFAC2000 for statewide SIP planning, and a conformity grace period for the entire state will not be established for EMFAC2000.

EPA's approval of EMFAC2000 for the Bay Area ozone attainment SIP would not affect

²EMFAC2000 would normally be considered the latest emissions model for statewide use in SIP development (rather than an interim update to the EMFAC model as EMFAC7G was an interim update to EMFAC7F). EMFAC2000 is a significant change from previous EMFAC models and is capable of calculating motor vehicle emissions for all California areas.

³EMFAC2001 will include a user interface so local agencies can examine alternative scenarios and update data (e.g., vehicle miles traveled (VMT), fleet characteristics). The future model will allow transportation agencies to complete their own conformity determinations. Note that in the Bay Area, CARB must work with the Metropolitan Transportation Commission (MTC) to complete future conformity determinations until the SIP is updated with the next version of EMFAC.

conformity analyses for other criteria pollutants in the Bay Area. EPA is approving the model only for use in ozone SIP preparation and the Bay Area is not revising SIPs for other pollutants. Since this approval is specific to ozone for the Bay Area, microscale analyses should continue to be based on EMFAC7F. EMFAC2000 will apply for all future ozone conformity analyses for the Bay Area ozone attainment SIP until a revised attainment SIP and budgets with EMFAC2001 or its successor is submitted, and EPA has found these revised budgets adequate.

Adequacy Process for the San Francisco Bay Area

EPA will extend the public comment period for the adequacy review of the budgets in the Bay Area's ozone attainment SIP. The comment period will be extended by 30 days once this memorandum and CARB's letter describing its commitment are posted on OTAQ's conformity website (<http://www.epa.gov/otaq/transp/conform/currsips.htm#sf>). CARB's commitment to revise its SIP with the latest technical information as part of its mid-course review is included in the SIP, which was subject to the state public comment process. The commitment is enforceable under the SIP and will be considered as part of EPA's adequacy finding and approval of the SIP. The submission further clarified that the EMFAC2001 model or its successor will be used for this SIP revision. However, the links between the revision of the SIP, the EMFAC update, and EPA's policy for EMFAC2000 were not previously clarified and made available to the public. Therefore, the public comment period on EPA's adequacy finding will be extended by 30 days.

Approval of EMFAC2001

Although EPA's potential approval of EMFAC2001, California's next emissions model, will not occur until farther into the future, I would like to take this opportunity to describe EPA's intentions. Upon appropriate consideration of the model's development to date, EPA currently intends to approve EMFAC2001 on a statewide basis for SIP development purposes. CARB is still completing internal and peer review on EMFAC2001, and it is EPA's understanding that the technical limitations of EMFAC2000 will be corrected in EMFAC2001.

Upon EMFAC2001's approval for SIP purposes, EPA would establish a grace period before EMFAC2001 would be required for new transportation conformity analyses across the state of California. The transportation conformity rule provides for a grace period of between 3-24 months, and EPA and DOT will consider providing transportation planners the maximum 2-year conformity grace period. EPA will publish a notice of availability in the Federal Register announcing the federal approval of EMFAC2001 for SIP purposes, and this notice will begin the conformity grace period. From now until the end of such a grace period, nonattainment and maintenance areas outside the Bay Area can continue to use EMFAC7F and EMFAC7G for new conformity analyses.⁴ It is also important to note that the conformity rule provides further flexibility for analyses that would be started before or during the EMFAC2001 grace period. See 40 CFR 93.111(c) for more information on this flexibility. We will provide further details on our

⁴For more information, please see the April 16, 1998, EPA Region IX letter to CARB.

EMFAC2001 policy in the future when the model is approved by EPA.

Use of Latest Planning Assumptions in Transportation Conformity Analyses

Finally, I wanted to clarify that this memorandum does not address the use of latest planning assumptions in conformity determinations in California. The January 18, 2001, EPA and DOT guidance memorandum, entitled, "Use of Latest Planning Assumptions in Conformity Determinations," and the conformity rule require conformity analyses to be based on the latest planning assumptions (e.g., fleet information) that are available (40 CFR 93.110).

Thank you for your assistance in developing the policies outlined in this memorandum. The policies should allow for improved emissions estimates in SIP and conformity processes and a reasonable transition for state and local agencies.